Home to Goddard Space Flight Center in Greenbelt, the Space Telescope Institute and Maryland Science Center in Baltimore, the James E. Richmond Science Center in Waldorf, and with spectacular views of launches from NASA’s Wallops Island launch facility on the Eastern Shore - when it comes to spectacular sights in Maryland, even the sky’s not the limit. And while the giant Hubble views on display at these incredible facilities are truly breathtaking, there’s nothing quite like getting out into the night air and seeing the stars with your own eyes.

In addition to Maryland’s two dedicated "dark sky" areas at Tuckahoe State Park on the Eastern Shore and Point Lookout State Park in St. Mary’s County, there are lots of great remote spots far from city lights to spy the sky. Also, Maryland’s amazing science education facilities often have telescope nights with guided sky viewing and interpretation of thrilling extra-planar action. Check with the Maryland Science Center, which hosts weekly “Friday Night Star Gazing” events, the James E. Richmond Science Center, and NASA’s Goddard Visitor’s Center for schedules and events. And keep track of this page as we update you on upcoming celestial events in the Maryland sky, as well as scheduled rocket launches from Wallops Island.

1 January 20-21: Blue Supermoon Total Lunar Eclipse

Blue moons, the second full moon in a month, are cool. Supermoons, when the moon is full at its closest point, are pretty rad. And total lunar eclipses? Wicked awesome. But all three together? Prepare to have your moon mind blown!

This rare event which is also called “The Super Blood Wolf Moon” – which might actually be more metal than Ozzy Osbourne riding a dragon and shooting lasers – will begin at 11:41PM on the 20th, and last for 62 minutes. The Super Blood Wolf Moon happens about once every 265 years, so no worries if you miss it. Just pencil it in your calendar for the year 2284....
2 March 20: Vernal Equinox

At 4:58 PM, the Earth’s equator will pass through the center of the sun marking the Vernal Equinox. This is the midpoint between day and night with each in perfect balance. That means you’ve got exactly as much time for doing stuff as for sleeping. Which makes for a good day.

3 April 11: Mercury at its Western Elongation

If you’re like us, a day doesn’t go buy when you’re not like, “Where’s Mercury?” or “Have you seen Mercury?” Well, not today folks, because Mercury is at its greatest western elongation! When Mercury is at its greatest western elongation, it’s at its highest point in the sky, making for the best Mercury viewing day of the year. Look for it in the eastern sky low over the horizon just before sunrise.

4 April 22-23: Lyrids Meteor Shower

Are you wondering, “Is the Lyrids Meteor Shower cool?” It’s a meteor shower! You know, space rocks hurtling through the atmosphere? It’s like a ’70s Pink Floyd concert without all the hippies and the flying pig. At its peak, this annual shower usually presents about 20 blazing, hurtling space rocks (or meteors, if you lack poetry in your soul) every hour, leaving bright trails lingering across the sky. So what we’re saying is, go someplace dark and look up!
5 May 6-7: Eta Aquarids Meteor Shower

Remember that symphony of burning sky rocks that was the Lyrids Meteor Shower? Of course you do. Well, Lyrids peaked at about 20 burning chunks of the ancient universe per hour. *Ho hum.* You mean I have to wait almost five minutes to see a five-billion year old hunk of celestial matter rip a mach 5 hole in the sky? Boring!

Well, if that’s how you feel, the Eta Aquarids Meteor Shower has you covered. With a startling 60 meteors an hour, you won’t have time to snapchat the look of total, rapturous wonder you just "selfied" before another burning cosmic orb streaks through the heavens.

6 June 10: Jupiter at Opposition

Why is Jupiter at opposition? It seems like that big swirling gas ball does this, like, every year! And what is opposition when we’re talking about planets? In the astronomical sense, it means that Jupiter, the largest planet in our solar system (How big you ask? If it had just tried a little harder at the dawn of our solar system, it could have been a second sun.) will be at its closest point and visible all night to the naked eye. With a good pair of binoculars, you should be able to see its moons. (Yes, plural. With 79, Jupiter is to moons as Kim Kardashian is to shoes.)

If you can get access to a telescope (and many local clubs and observatories can help you), you will be treated to a view of the Great Red Spot, a massive storm that has likely been raging on the gas giant for hundreds of years. It's an anti-cyclonic storm, which essentially means an anti-cyclone. Don’t worry though. It may be about 25,000 miles across (big enough to swallow the Earth), but it’s winding down and should clear up in a few centuries. Remember that the next time you complain about the weather.
7 June 21: Summer Solstice

It’s the longest day and shortest night of the year! Nothing special to note in the sky, but your friend with all the crystals might know of a cool party.

8 July 9: Saturn at Opposition

First Jupiter, now Saturn? Try to ignore Saturn’s opposition and general contrarian attitude, as today is Saturn’s closest approach of the year, and the best day of the year to see the ringed giant. With a decent telescope you’ll be able to see the rings and some moons.

9 July 28-29: Delta Aquarids Meteor Shower

Ho hum, another meteor shower. Just another night full of shooting stars where you can get about 20 wishes an hour. BO-RING! NOT! How about EPIC?!?!?! The waning crescent moon means you should have great viewing for this shower, with meteors seeming to shoot from the depths of the constellation Aquarius.
10 August 12-13: Perseids Meteor Shower (AKA THE BIG ONE!)

Little known fact, meteor showers are produced by passing comets. In the case of the Perseids, it’s comet Swift-Tuttle which is currently hurtling through the cosmos at a speed of about 134,216 mph. If you’re wondering, that’s 134,146 mph above Maryland’s top legal speed limit. And at that rate, it still won’t be back for an Earth fly-by until 2126.

While we wait, we can entertain ourselves with the debris left in its furious wake. Made up of chunks of space rock torn from Swift-Tuttle as it careens through the solar system on its 133-year round trip, the Perseid Shower usually provides some of the best nights of the year to see shooting stars in Maryland. Perseid frequently fires more than 60 blazing rocks through the stratosphere every hour, often with two or more meteors leaving a blazing trail in the sky at the same time. It’s intense, so don’t miss it.

11 September 23: Autumnal Equinox

You feel that, bro? It’s total balance in the universe. At 3:50 AM, the equator will be in harmony with the center of the sun, which is some seriously cosmic stuff. We call it the equinox, when night and day are precisely the same length.

12 October 27: Uranus at Opposition
You’ve got Google. The less said here, the better….

13 November 11: Mercury Transits Across the Sun

Down in front! Are you trying to stare directly into the sun, but Mercury is all up in the way? Oh wait, that’s actually really cool, and super-rare; won’t happen again until 2039. If you don’t want to wait 21 years, you’re in luck, as Maryland is one of the best spots on the planet to view this remarkable phenomena. With a decent telescope and an approved solar filter, you’ll see the dark disk of Mercury transition across the face of the sun.

14 November 24: Venus and Jupiter in Conjunction

Isn’t it nice to see these two getting along? These two bright planets will be within 1.4 degrees of one another in the western sky just after sunset. Romantic, right?

15 December 13-14: Geminids Meteor Shower (AKA, THE BIGGEST ONE!!!!)

Remember all of those other meteor showers? They were cool. Well, prepare to have your mind re-blown as the big momma of the annual celestial calendar bombards planet earth with millions of tiny projectiles left over from Comet 3200 Phaeton’s last dance. Though the shower runs from the 7th through the 17th, the 13th and 14th are the peak, with more than 120 multicolored meteors burning through the heavens every hour. Most of
the meteors should be pouring from the constellation Gemini (hence the name, Geminids. Get it?) with best viewing after midnight.